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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,738	12/16/2004	. David M Avery	GB02 0098 US	1318
<div>24738 7590 10/31/2007</div> <div>PHILIPS ELECTRONICS NORTH AMERICA CORPORATION</div> <div>INTELLECTUAL PROPERTY & STANDARDS</div> <div>370 W. TRIMBLE ROAD MS 91/MG</div> <div>SAN JOSE, CA 95131</div>				
			<div>EXAMINER</div> <div>AMINZAY, SHAIMA Q</div>	
			<div>ART UNIT</div> <div>2618</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>10/31/2007</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,738

Applicant(s)

AVERY ET AL.

Examiner

Shaima Q. Aminzay

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to applicant's amendment/remarks filed 8/23/2007.

Response to Arguments

1. Response to argument with respect to the rejected claims 1-4, 6-10, 12-13 under Claim Rejections-35 U.S.C. 102(b), rejected claims 5, 11, and 14 under Claim Rejections-35 U.S.C. 103(a) is **moot** as the amendment necessitated the **new ground(s)** of rejection, therefore, the Claim Rejections with respect to claims 1-14 withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida (Ishida et al., U. S. Patent 6,055,411) in view of Lee (Lee, U.S. Publication No. 2002/0045,424).

Regarding claim 1, Ishida discloses a method for extending the radio coverage area of a communication system operating according to a predetermined radio protocol (*e.g.*, *Fg*

1-6, cl 1, ln 6-18, ln 55-65, cl 2, ln 49-58, cl 5, ln 61-63, cl 8, ln 30-32, cl 9, ln 10-13, the area of radio communication is being increased with respect of predetermined radio communication information including protocol), the system comprising a primary master station having a radio coverage area (e.g., Fig 1 and 5, cl 1, ln 55-65, cl 2, ln 49-58, cl 5, ln 61-63, cl 8, ln 8-11, the primary station (e.g. Fig 1(CS2) or Fig 5(CS1)) with it's coverage area), a first secondary [slave] station within the coverage area and a further secondary [slave] station which is located outside of the radio coverage area of the primary [master] station (e.g., Fig 1, 5, cl 1, ln 55-65, cl 2, ln 49-58, cl 5, ln 61-63, cl 8, ln 8-25, the second station (Fig. 1(CS1) or Fig. 5 (CS2)) within the coverage area of the primary station (e.g. Fig 1(CS2) or Fig 5(CS1)) and the other station (further secondary) outside the coverage area (211)), the method comprising a message exchange process (e.g., Fig 2-4, 6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, message exchanging process) in which:

the first secondary slave station receives from the primary master station messages intended for the further secondary slave station (e.g., Fig 1-6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) receives message from the station primary station (Fig. 1 (CS2), Fig. 5 (CS1)) for the other (further) station (Fig. 1 (101) or Fig. 5 (211))); and transmits said messages to the further secondary slave station (e.g., Fig 1-6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) transmits message data to the other (further) station (Fig. 1 (101) or Fig. 5 (211))); and the first secondary slave station receives from the further secondary slave station

messages intended for the primary master station (*e.g.*, *Fig 1- 6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) receives data messages from the other (further) station (Fig. 1 (101) or Fig. 5 (211))for the primary station (Fig. 1 (CS2), Fig. 5 (CS1))*); and transmits said messages to the primary master station (*e.g.*, *Fig 2-4, 6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) transmits data messages to the primary station (Fig. 1 (CS2), Fig. 5 (CS1))*)).

Ishida does not specifically teach the master slave, however, Ishida teaches radio coverage area of a communication system operating according to a predetermined radio protocol (*e.g. Fig. 1-6*) comprising a primary station, first secondary station, and a further secondary station (*e.g., Fig 1, cl 1, ln 55-65, cl 5, ln 61-63, the primary station (e.g. Fig 1(CS2)) the second station (Fig. 1(CS1) or Fig. 5 (CS2)) within the coverage area of the primary station and the other station (further secondary) outside the coverage area (211 or 101)*)).

In a related art dealing with radio coverage area (*e.g., Fig 1-8, pg [5], ln 1-11, [6], ln 1-3, [46], ln 1-10*), Lee teaches the radio coverage area master slave (*e.g., Fig 1-8, pg [5], ln 1-11, [6], ln 1-3, [8], ln 1-9, [46], ln 1-10*).

It would have been obvious to one of ordinary skill in the art at the time invention was made to have included Lee's wireless radio communication master (primary) station and slave (secondary) stations with Ishida's wireless radio communication primary station and secondary stations to provide radio communication system with primary master station and secondary slave stations to improve the mobility of the communication

devices and improve various services of voice and data in expended coverage area such as external network (*Lee, e.g., pg [46], ln 6-10, [66], ln 3-7*).

Regarding claim 7, Ishida discloses communication system operating according to a predetermined radio protocol (*e.g., Fg 1-6, cl 1, ln 6-18, ln 55-65, cl 2, ln 49-58, cl 5, ln 61-63, cl 8, ln 30-32, cl 9, ln 10-13, the communication system operates with respect to the radio communication protocol*) and comprising a primary [master] station having a radio coverage area (*e.g., Fg 1 and 5, cl 8, ln 8-11, the primary station (e.g. Fg 1(CS2) or Fg 5(CS1)) with it's coverage area*), a first secondary [slave] station within the coverage area and a further secondary [slave] station which is located outside of the radio coverage area of the primary [master] station (*for example, Fg 5, cl 8, ln 8-25, the second station (Fig. 1(CS1) or Fig. 5 (CS2)) within the coverage area of the primary station (e.g. Fg 1(CS2) or Fg 5(CS1)) and the other station (211) that is further secondary station outside the coverage area of the primary station (e.g. Fg 1(CS2) or Fg 5(CS1))*), the first secondary slave station having means for receiving from the primary master station messages intended for the further secondary slave station (*e.g., Fg 1-4, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) receives message from the station primary (e.g. Fg 1(CS2) or Fg 5(CS1)) for the other (further) station (Fig. 1 (101) or Fig. 5 (211))*), for transmitting said messages to the further secondary slave station (*e.g., Fg 2-4, 6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) transmits message data to the other (further) station (Fig. 1*

(101) or Fig. 5 (211))), for receiving from the further secondary slave station messages intended for the primary master station (e.g., Fig 2-4, 6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) receives data messages from the other (further) station (Fig. 1 (101) or Fig. 5 (211)) for the primary station (e.g. Fig 1(CS2) or Fig 5(CS1))) and for transmitting said messages to the primary master station (e.g., Fig 2-4, 6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) transmits data messages to the primary station (e.g. Fig 1(CS2) or Fig 5(CS1))).

Ishida does not specifically teach the master slave, however, Ishida teaches radio coverage area of a communication system operating according to a predetermined radio protocol (e.g. Fig. 1-6) comprising a primary station, first secondary station, and a further secondary station (e.g., Fig 1, cl 1, ln 55-65, cl 5, ln 61-63, the primary station (e.g. Fig 1(CS2)) the second station (Fig. 1(CS1) or Fig. 5 (CS2)) within the coverage area of the primary station and the other station (further secondary) outside the coverage area (211 or 101)).

In a related art dealing with radio coverage area (e.g., Fig 1-8, pg [5], ln 1-11, [6], ln 1-3, [46], ln 1-10), Lee teaches the radio coverage area master slave (e.g., Fig 1-8, pg [5], ln 1-11, [6], ln 1-3, [8], ln 1-9, [46], ln 1-10).

It would have been obvious to one of ordinary skill in the art at the time invention was made to have included Lee's wireless radio communication master (primary) station and slave (secondary) stations with Ishida's wireless radio communication primary station and secondary stations to provide radio communication system with primary master

station and secondary slave stations to improve the mobility of the communication devices and improve various services of voice and data in expended coverage area such as external network (*Lee, e.g., pg [46], ln 6-10, [66], ln 3-7*).

Regarding claim 12, Ishida discloses first secondary [slave] station for use in a communication system operating according to a predetermined radio protocol and having a primary [master] station having a radio coverage area (*e.g., Fg 1-6, cl 1, ln 6-18, ln 55-65, cl 2, ln 16-32, ln 49-58, cl 5, ln 61-63, cl 8, ln 8-25, ln 30-32, cl 9, ln 10-13, the secondary station (Fig. 1 (CS1) or Fig. 5 (CS2)) having predetermined radio (RF) protocol with the primary station (Fig. 1 (CS2) or Fig. 5 (CS1)) with the RF coverage*), and a further secondary [slave] station which is located outside of the radio coverage area of the primary [master] station (*e.g., Fg 1-6, cl 1, ln 6-18, ln 55-65, cl 2, ln 16-32, ln 49-58, cl 5, ln 61-63, cl 8, ln 8-25, ln 30-32, cl 9, ln 10-13, and the other station (Fig. 1 (101) or Fig. 5 (211)) that is further secondary station outside the coverage area of the primary station (Fig. 1 (CS2) or Fig. 5 (CS1))*), the first secondary slave station being located within the radio coverage area of the primary master station and comprising means for receiving from the primary master station messages intended for the further secondary slave station, for transmitting said messages to the further secondary slave station (*e.g., Fg 1-6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, the secondary station (Fig. 1 (CS1) or Fig. 5 (CS2)) transmits message data to the other (further) station (Fig. 1 (101) or Fig. 5 (211))*), for receiving from the further secondary slave station messages intended for the primary master station and for transmitting said

messages to the primary master station (*e.g.*, *Fig 1-6, cl 1, ln 55-65, cl 2, ln 16-32, cl 6, ln 24-28, ln 49, cl 7, ln 50-65, and the secondary station (Fig. 1(CS1) or Fig. 5 (CS2)) receives message data for the other (further) station (Fig. 1 (101) or Fig. 5 (211))*)).

Ishida does not specifically teach the master slave, however, Ishida teaches radio coverage area of a communication system operating according to a predetermined radio protocol (*e.g. Fig. 1-6*) comprising a primary station, first secondary station, and a further secondary station (*e.g., Fig 1, cl 1, ln 55-65, cl 5, ln 61-63, the primary station (e.g. Fig 1(CS2)) the second station (Fig. 1(CS1) or Fig. 5 (CS2)) within the coverage area of the primary station and the other station (further secondary) outside the coverage area (211 or 101)*)).

In a related art dealing with radio coverage area (*e.g., Fig 1-8, pg [5], ln 1-11, [6], ln 1-3, [46], ln 1-10*), Lee teaches the radio coverage area master slave (*e.g., Fig 1-8, pg [5], ln 1-11, [6], ln 1-3, [8], ln 1-9, [46], ln 1-10*)).

It would have been obvious to one of ordinary skill in the art at the time invention was made to have included Lee's wireless radio communication master (primary) station and slave (secondary) stations with Ishida's wireless radio communication primary station and secondary stations to provide radio communication system with primary master station and secondary slave stations to improve the mobility of the communication devices and improve various services of voice and data in expended coverage area such as external network (*Lee, e.g., pg [46], ln 6-10, [66], ln 3-7*)).

Regarding claim 2, Ishida in view of Lee teach all the limitations of claim 1, and

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further, Ishida teaches wherein the message exchange process follows a registration process in which: the further secondary slave station transmits to the first secondary slave station a message comprising registration information (*e.g., Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, the message exchange process of primary station (Fig. 1 (CS2), secondary station (Fig. 1 (CS1)), and other (further) station (101) and registrations*),

and the first secondary slave station transmits said registration information to the primary master station to register the further secondary slave station with the primary master station (*e.g., Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, the message exchange process of primary station (Fig. 1 (CS2), secondary station (Fig. 1 (CS1)), and other (further) station (101) and registrations*).

Regarding claim 3, Ishida in view of Lee teach all the limitations of claim 2, and further, Ishida teaches wherein the registration information comprises a unique identifier identifying the further secondary slave station (*e.g., Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, cl 6, ln 1-7*),

and wherein: the primary master station registers the further secondary slave station by allocating a first identifier associated with the unique identifier of that station and transmits said first identifier to the first secondary slave station (*e.g., Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, cl 6, ln 1-7*),

and wherein the first secondary slave station allocates a second identifier associated with the first identifier and with the unique identifier and transmits the second identifier to the

further secondary slave station, and wherein messages are subsequently exchanged according to the associated identifiers (*e.g.*, *Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, cl 6, ln 1-7*).

Regarding claims 4, and 9, Ishida in view of Lee teach all the limitations of claims 3, 7, and further, Ishida teaches wherein communication between the primary master station and the first secondary slave station is synchronised according to a first periodic beacon signal transmitted by said primary master station (*e.g.*, *Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, ln 17-39, cl 6, ln 1-7*).

Regarding claims 5, and 10, Ishida in view of Lee teach all the limitations of claims 4, 9, and further, Ishida teaches wherein the first secondary slave station reserves a portion of the time period between the periodic beacon signals, and wherein the first secondary slave station transmits and receives messages to and from the further secondary slave station during this reserved time period (*e.g.*, *Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, ln 17-39, cl 6, ln 1-7*).

Regarding claims 8, and 13, Ishida in view of Lee teach all the limitations of claims 7, 12, and further, Ishida teaches wherein the first secondary slave station further comprises means for receiving a message comprising registration information from the further secondary slave station (*e.g.*, *Fig 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, cl 6, ln 1-7*) and means for transmitting said registration information to the

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primary master station to register the further secondary slave station with the primary master station (*e.g.*, *Fg 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, cl 6, ln 1-7*).

3. Claims 6, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida (Ishida et al., U. S. Patent 6,055,411) in view of Lee (Lee, U.S. Publication No. 2002/0045,424), and further in view of Olson (Olson et al., U.S. Patent 6,830,340).

Regarding claims 5, 11, and 14, Ishida in view of Lee teach all the limitations of claim 1, 7, 12, and further, Ishida teaches wherein the predetermined radio protocol is that defined as the *[ZigBee]* radio standard (*e.g.*, *Fg 1-4, cl 1, ln 55-65, cl 2, ln 16-28, ln 49-58, cl 3, ln 8-10, cl 5, ln 4-10, ln 17-39, cl 6, ln 1-7, cl 8, ln 30-32, the defined radio protocol is predetermined*). However, Ishida does not specifically teach the ZigBee standard.

In related art, Olson teaches the ZigBee radio standard (*see for example, cl 2, ln 7-8, cl 1, ln 45-54, cl 2, ln 7-16, cl 3, ln 55-67, cl 5, ln 30-33, ln 66-67, cl 6, ln 1-19, cl 8, ln 28-38*).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Olson's ZigBee standard with Lee's and Ishida's wireless radio communication system to provide a communication system with extended coverage area and increased interface capabilities for different data transmission of mobile wireless

networks (*Olson, see for example, cl 3, ln 55-67*).

Conclusion

The prior art made of record considered pertinent to applicant's disclosure, see PTO-892 form.

Applicant's amendment necessitated the **new ground(s)** of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

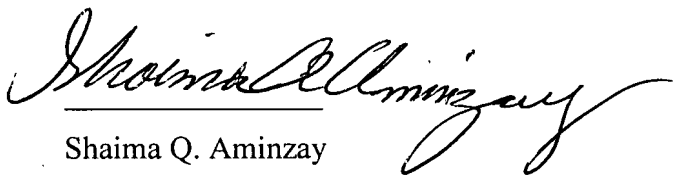
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Inquiry

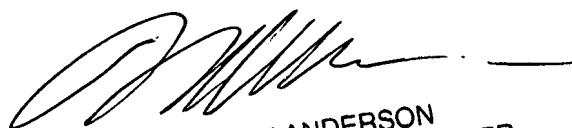
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 571-272-7874. The examiner can normally be reached on 7:00 AM -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mathew D. Anderson can be reached on 571-272-4177. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shaima Q. Aminzay
(Examiner)



MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER

October 28, 2007